

CLAIMS

1 A file recording/reproducing apparatus adapted for performing recording/reproduction of video data, through a recording medium, as a file in which management information for performing management of real data are collected by hierarchical structure, the file including block of management information at least including video tracks by management information of video data and Effect tracks by management information of Effects to be set at the video data, and block of real data at least including real data according to the Effect tracks,

the file recording/reproducing comprising:

a recording/reproducing unit for recording/reproducing, through the recording medium, data of boxes of the real data and the management information;

a data processing unit for sequentially setting management unit at the real data to sequentially acquire the management information in correspondence with recording/reproduction of the real data to hold the management information thus acquired in a memory to output, to the recording/reproducing unit, data of the box of the management information by the management information held in the memory by responding to completion of recording of the real data; and

a control unit for accepting an input by user to prepare plural

management information different in reproduction purpose such as original Movie and Movie to which Effect has been implemented to the Movie, etc. at the time of recording video data in performing edit function of preparation and deletion of Effect track, and preparation, processing and deletion of Effect track period within the Effect track.

- 2 The file recording/reproducing apparatus as set forth in claim 1,
wherein the control unit serves to automatically prepare block of management information having Effect tracks in accordance with instruction input to designate an arbitrary period in which Effect is desired to be implemented during recording of video data.
- 3 The file recording/reproducing apparatus as set forth in claim 2,
wherein the control unit is operative so that when any instruction input is not given from starting of recording to end thereof, it does not prepare block of management information having Effect track, or it prepares block of management information having Effect track using Null effect in which no Effect appears.
- 4 The file recording/reproducing apparatus as set forth in claim 1,
wherein the control unit serves to automatically prepare Effect period of a desired Effect kind/parameter within the Effect track in accordance with instruction input to designate an arbitrary period in which Effect is desired to be implemented during recording or reproduction of video data.

- 5 The file recording/reproducing apparatus as set forth in claim 4,
 wherein Effect release is further included in the Effect kind/parameter
 that the control unit prepares so that deletion of Effect period is resultantly
 provided.
- 6 The file recording/reproducing apparatus as set forth in claim 1,
 wherein the control unit is operative so that in the case where Effect
 tracks are all in Null Effect state where no Effect appears after recording or
 reproduction of video data is completed, it serves to delete block itself of
 management information having Effect tracks.
- 7 The file recording/reproducing apparatus as set forth in claim 1,
 wherein the control unit is operative so that in the case where Effect
 period is prepared, when any different Effect period already exists at a portion
 or the entirety of the Effect period, previous Effect is overwritten by current
 Effect at the Effect period.
- 8 The file recording/reproducing apparatus as set forth in claim 1,
 wherein the control unit is operative so that in the case where Effect
 period is prepared, when any different Effect period already exists at a portion
 or the entirety of the Effect period, new Effect track is added at the Effect
 period to prepare Effect period therein so that multiple Effect is provided.
- 9 The file recording/reproducing apparatus as set forth in claim 1,
 wherein the control unit serves to attach plural marks onto the time

axis by instruction input from user at the time of recording video data to set an arbitrary Effect kind/parameter at a period between arbitrary marks after record photographing operation is completed to prepare block of management information having Effect track in accordance with that setting.

10 An editing method for video Effect at a file recording/reproducing apparatus adapted for performing recording/reproduction of video data, through a recording medium, as a file in which management information for performing management of real data are collected by hierarchical structure, the file including block of management information at least including video tracks by management information of video data and Effect tracks by management information of Effects to be set at the video data, and block of real data at least including real data according to the Effect tracks,

the editing method for video effect comprising:

accepting an input by user to prepare plural management information different in reproduction purpose such as original Movie and Movie in which Effect has been implemented to the Movie at the time of recording video data in performing edit function of preparation and deletion of Effect track, and preparation, processing and deletion of Effect track period within the Effect track.

11 The editing method for video Effect as set forth in claim 10,
wherein block of management information having Effect tracks is

automatically prepared in accordance with instruction input to designate an arbitrary period in which Effect is desired to be implemented during recording of video data.

12 The editing method for video Effect as set forth in claim 11,
wherein when any instruction input is not given from the start of recording to the end thereof, block of management information having Effect track is not prepared, or block of management information having Effect track using Null Effect in which no Effect appears is prepared.

13 The editing method for video Effect as set forth in claim 10,
wherein Effect period of a desired Effect kind/parameter is automatically prepared within the Effect track in accordance with an instruction input to designate an arbitrary period to which Effect is desired to be implemented during recording or reproduction of video data.

14 The editing method for video Effect as set forth in claim 13,
wherein Effect release is also included in the Effect kind/parameter so that deletion of Effect period is resultantly provided.

15 The editing method for video Effect as set forth in claim 10,
wherein in the case where Effect tracks are all in Null Effect state where no Effect appears after recording or reproduction of video data is completed, block itself of management information having Effect track is deleted.

- 16 The editing method for video Effect as set forth in claim 10,
wherein in the case where when Effect period is prepared, any
different Effect period already exists within a portion or the entirety of Effect
period, previous Effect is overwritten by current Effect at the Effect period.
- 17 The editing method for video Effect as set forth in claim 10,
wherein in the case where when Effect period is prepared, any
different Effect period already exists within a portion or the entirety of Effect
period, new Effect track is added at the Effect period to prepare Effect period
thereat so that multiple Effect is provided.
- 18 The editing method for video Effect as set forth in claim 10,
wherein plural marks are attached on the time axis by instruction input
from user at the time of recording video data to set an arbitrary Effect
kind/parameter at a period between arbitrary marks after record photographing
is completed to prepare block of management information having Effect track
in accordance with that setting.